KWIK-WAY®

108

ON-THE-CAR

KWIK-LATHE

Instruction Manual and Parts List

Kwik-Way Products Inc. **800-553-5953**
Copyright 2005. All Rights Reserved
50 5 7th Street, Marion, IA 52302 USA
Equipment specifications, options and accessories subject to change without notice

521 WARRANTY
Brake Lathes · Tire Changers · Wheel Balancers

Kwik-Way Products Inc. *(Kwik-Way)* provides a limited 521 Warranty on products when purchased in a new and unused condition to be free from defective material or workmanship from date of purchase as per the following:

Product Category	BENCH MODEL LATHES	ON-CAR-LATHES	PASSENGER CAR TIRE CHANGERS	WHEEL BALANCERS	TRUCK LATHES AND TIRE CHANGERS
5 Years	Spindle, spindle bearing and housing	Cast iron components, excluding guide rods	Transmission	Frame, welding construction	N/A
2 Years	All other mechanical parts	All other mechanical parts	All other mechanical parts	All other mechanical parts	N/A
1 Year	Motor, electrical components and labor	Motor, electrical components and labor	Motor, electrical components and labor	Motor, electrical components and labor	Machine, components and labor

Kwik-Way will repair and/or replace, free of charge (FOB factory) all such defective parts, only when returned to factory with shipping charges prepaid. This warranty does not cover parts and supplies (nylon inserts, nylon mount-demount heads, breaker blade covers, and mount-demount covers) consumed in normal operation of the machine.

Kwik-Way disclaims all other warranties, expressed or implied, as to the quality of any goods, including implied warranties of MERCHANTABILITY and FITNESS FOR PARTICULAR PURPOSES. UNDER NO CIRCUMSTANCES WHATSOEVER, SHALL ***Kwik-Way*** BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES, WHETHER BASED ON LOST GOODWILL, LOST RESALE PROFITS, WORK STOPPAGE, IMPAIRMENT OF OTHER GOODS OR ARISING OUT OF BREACH OF ANY EXPRESS OR IMPLIED WARRANTY, BREACH OF CONTRACT, NEGLIGENCE OR OTHERWISE, EXCEPT ONLY IN THE CASE OF PERSONAL INJURY.

Because of ***Kwik-Way's*** constant program of product improvement, specifications are subject to change without notice.

This warranty does not apply to a product that has been purchased in used condition, that has failed due to improper installation, repairs, service or that has sustained damage caused by accident, improper use or shipment.

Model #: _____ Serial #: _____

Purchase Date: _____

For further information or questions, please contact ***Kwik-Way Products Inc. at 800/553-5953 or 319/377-9421, fax 319/377-9101, email*** service@kwik-way.com

Kwik-Way Products Inc.
800-553-5953
Copyright 2005. All Rights Reserved
50 5 7th Street, Marion, IA 52302 USA
Equipment specifications, options and accessories subject to change without notice

RECEIVING SHIPMENT

Upon taking delivery of your machine, carefully inspect the assembly before removing the crating and packing materials.

If evidence of damage exists, contact the shipper and ***Kwik-Way Products Inc.*** immediately. Although ***Kwik-Way Products Inc***. is not responsible for damage incurred during transit, you will be provided assistance in preparation and filing of any necessary claims.

CAREFULLY READ THIS MANUAL BEFORE ATTEMPTING TO SETUP OR OPERATE THIS MACHINE.

IMPORTANT NOTE

Always have your serial number ready when communicating with ***Kwik-Way Products Inc.*** regarding parts or service.

Keep this manual in a safe place.

Date Received: _____

Serial Number: _____

(Serial Number location: Upper left corner at rear of unit)

Kwik-Way Products Inc. **800-553-5953**
Copyright 2005. All Rights Reserved
50 5 7th Street, Marion, IA 52302 USA
Equipment specifications, options and accessories subject to change without notice

SAFETY FIRST

This manual has been prepared for the owner and those responsible for the maintenance of this machine. It's purpose aside from proper maintenance and operations, is to promote safety through the use of accepted practice. READ THE SAFETY AND OPERATING INSTRUCTIONS THOROUGHLY BEFORE OPERATING THE MACHINE.

In order to obtain maximum life and efficiency from your machine, follow all the instructions in the operating manuals carefully.

The specifications put forth in this manual were in effect at the time of publication. However, owing to Kwik-Way Products Inc. policy of continuous improvement, changes to these specifications may be made at any time without obligation.

Copyright 2005. All Rights Reserved

SAFETY INSTRUCTIONS

1. Read, understand and follow the safety and operating instructions found in this manual. Know the limitations and hazards associated with operating the machine.

2. Eye Safety: Wear an approved safety face shield, goggles or safety glasses to protect eyes when operating the machine.

3. Grounding the Machine: Machines equipped with three prong grounding plugs are so equipped for your protection against shock hazards and should be plugged directly into a properly grounded three-prong receptacle in accordance with national electrical codes and local codes and ordinances. A grounding adapter may be used. If one is used, the green lead should be securely connected to a suitable electrical ground such as a ground wire system. Do not cut off the grounding prong or use an adapter with the grounding prong removed.

4. Work Area: Keep the floor around the machine clean and free of tools, tooling, stock scrap and other foreign material and oil, grease or coolant to minimize the danger of tripping or slipping. Kwik-Way recommends the use of anti-skid floor strips on the floor area where the operator normally stands and that each machine's work area be marked off. Make certain the work area is well lighted and ventilated. Provide for adequate workspace around the machine.

5. Guards: Keep all machine guards in place at all times when machine is in use.

6. Do Not Overreach: Maintain a balanced stance and keep your body under control at all times.

7. Hand Safety: NEVER wear gloves while operating this machine.

8. Machine Capacity: Do not attempt to use the machine beyond its stated capacity or operations. This type of use will reduce the productive life of the machine and could cause the breakage of parts, which could result in personal injury.

9. Avoid Accidental Starting: Make certain the main switch is in the OFF position before connecting power to the machine.

10. Careless Acts: Give the work you are doing your undivided attention. Looking around, carrying on a conversation and horseplay are careless acts that can result in serious injury.

11. Job Completion: If the operation is complete, the machine should be emptied and the work area cleaned.

12. Disconnect All Power and Air to Machine before performing any service or maintenance.

13. Replacement Parts: Use only Kwik-Way replacement parts and accessories; otherwise, warranty will be null and void.

14. Misuse: Do not use the machine for other than its intended use. If used for other purposes, Kwik-Way Products Inc. disclaims any real or implied warranty and holds itself harmless for any injury or loss that may result from such use.

Copyright 2005. All Rights Reserved

WARNINGS AND CAUTIONS

WARNINGS:

Warning: Always use OSHA approved protective eye covering during the disc turning operation.

Warning: Keep the rotor secure on the hub, reinstall and tighten all lugs. Install stud guard over the studs or lug nuts to prevent loose clothing from catching on them.

Warning: Use a hoist or car stands to support the vehicle while turning rotors. Do not use a bumper jack or any temporary means to support the vehicle.

Warning: Caliper mounting surface must be free of rust and/or scale for accurate mounting of the links or KWIK-ADAPTERS.

Warning: When starting the car to turn the rotor, keep feet off the brake. Depressing the pedal could cause damage to the disconnected caliper.

Warning: Keep loose clothing, fingers and body away from spinning rotor. Failure to do so could result in Serious Injury.

CAUTIONS

Caution: It is possible to mount the tool bed upside down. Be sure the tool bits are in the up position or the bits and or the rotor will be damaged.

Caution: Be sure the tool bed does not contact any obstruction when in the fully extended position.

Caution: The vehicle rotor MUST ALWAYS turn toward the top of the tool bits.

Copyright 2005. All Rights Reserved

SPECIFICATIONS

ROTOR SIZE

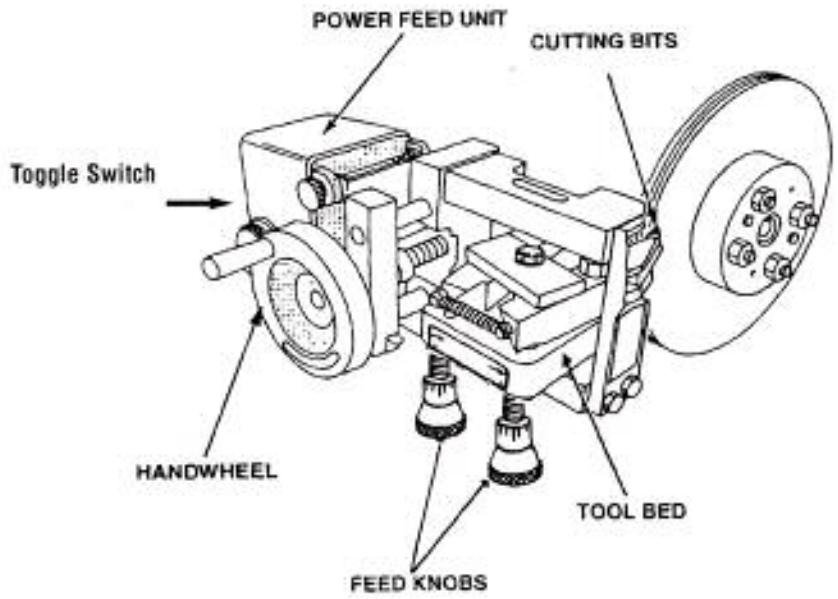
MIN. Rotor thickness	0”
MAX. Rotor thickness	1.5” (38mm)
MAX. Rotor diameter	13.5” (343mm)

FEED RATES

.002 Per Revolution
.004 Per Revolution
.006 Per Revolution

SHIPPING WEIGHT

35 lbs. (15.9 Kg)
38 lbs. W/power feed (17.3 Kg)



Copyright 2005. All Rights Reserved

SET-UP AND OPERATING INSTRUCTIONS

HELPFUL HINTS

1. Refer to the appropriate service manual for the minimum rotor thickness specification BEFORE starting the set-up and turning operation. If any disc is below specification------ REPLACE.

2. Before beginning the turning operation, examine the cutting bits for signs of wear or damage. If the cutting edge is worn, rotate the bit to the next cutting edge. When all three edges are worn, replace them with KWIK-WAY inserts Part Number 109-1092-23.

3. Warm up the car in Park or in Neutral before attempting the turning operation. When the engine is cold, the idle R.P.M. will be too high causing premature failure of the tool bits and poor finish on the rotor. If using the Power Drive, put the car in neutral and attach the hub driver.

4. Always use the slowest speed on the power feed unit to obtain the best rotor finish.

5. Before beginning the turning operation, be sure the cutting inserts are not in contact with the raised center portion of the hub.

6. For ease of installation and alignment, tool holder assembly may be removed from the lathe and reinstalled after the lathe has been attached to the caliper mount adapters.

Copyright 2005. All Rights Reserved

FOR ALL HONDA AND ACURA CARS

1. Before beginning the turning operation, install the lug nuts to hold the disc in place. The closed end lug nuts used on some models will bottom-out and not hold the disc securely enough.

   Use a flat washer along with this type of lug nut or use a conventional open end lug nut. Torque the lug nuts to the appropriate specification indicated in the service manual.

2. Remove the caliper assembly and use the S-hook provided with the Kwik-Lathe to secure the caliper to the shock tower or spring. Be careful not to kink the brake hose, or to use it to support the caliper.

3. Measure the caliper thickness; refer to your service manual for the correct procedure.

4. Attach a tie down to the rotor lug on the opposite side to prevent the rotor from turning. [refer to training bulletin BK-01 for details.]

   NOTE: On Prelude ATTS do not use a tie down on the opposite side. Both wheels must turn during the rotor resurfacing.

5. Install the Honda Speed Mounting Kit Part Number108-0060-00 as described in the instruction sheet.

6. Install the vibration damper to the rotor to minimize chattering and produce the best finish.

7. Attach the brake lathe frame to the speed mount, then bolt the tool holder assembly to the frame making sure to center tool holder to the rotor.

HELPFUL HINT:

For easy attachment and to prevent damage to the cutting bits, remove the tool holder from the brake lathe before mounting the lathe.

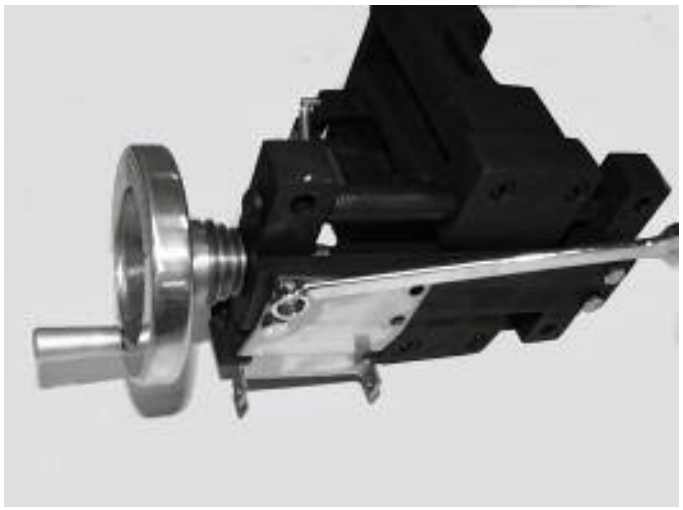
REFER TO THE MAIN TEXT FOR TURNING OPERATION

Copyright 2005. All Rights Reserved

ATTACHING THE POWERFEED

1. Remove the two 1/4” X 20 hex head bolts located on the handwheel end of the frame.

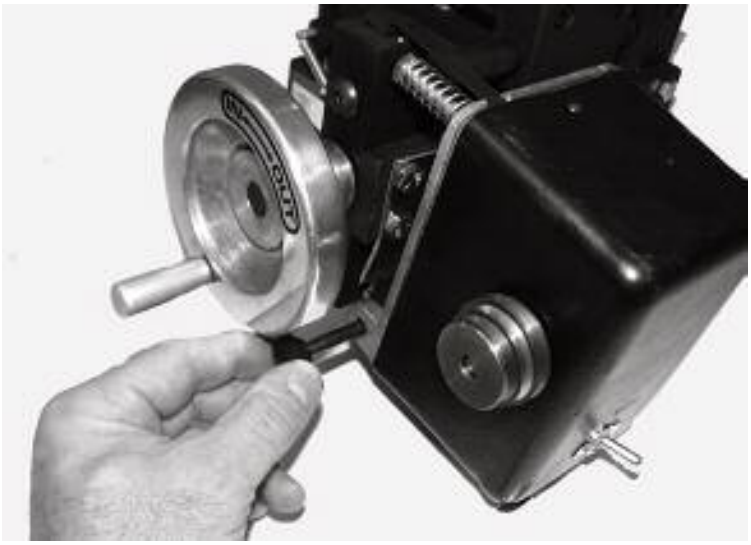
2. Use these bolts to attach the support hinge provided with the power feed. The pivot bolt hole should be down and positioned away from the frame.



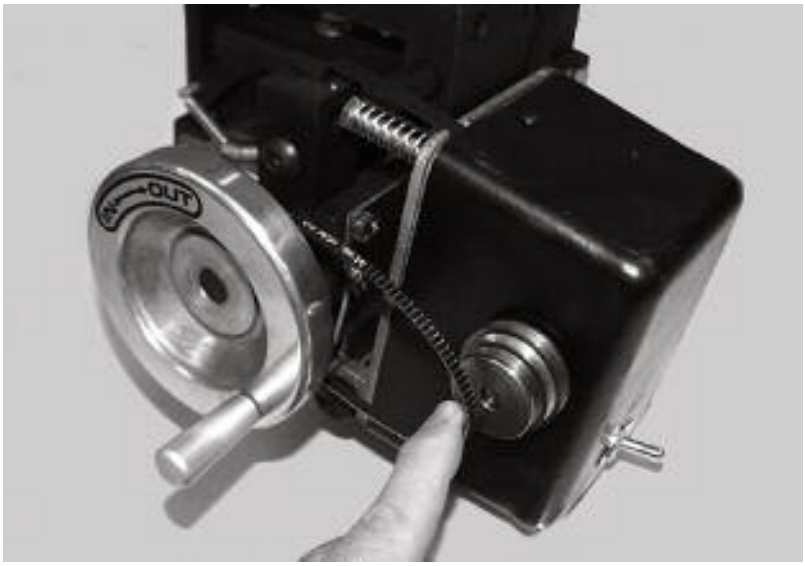
Copyright 2005. All Rights Reserved

ATTACHING THE POWERFEED (continued)

3. Using the 1/4" X 3” pivot bolt, attach the power feed to hinge plate.



4. Install the V-belt by first slipping the belt over the hand wheel. While holding the power feed in against the Kwik-Lathe, position the belt over the two middle pulley grooves.



Copyright 2005. All Rights Reserved

SET-UP ON CAR

1. Raise the vehicle and support on stands or lift.

WARNING: Follow the vehicle manufacturers requirements on safe and proper lifting procedures.

2. Remove tire and wheel then lock opposite wheel to keep it from rotating.

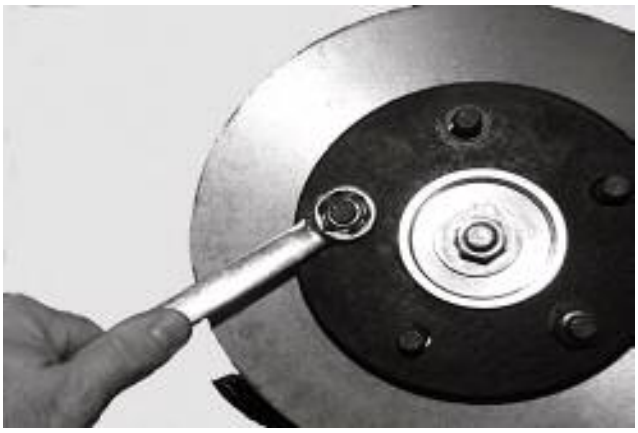
3. Use the wire S-hook provided to secure the caliper to the spring or shock tower.

CAUTION: Do not use the brake hose to support the caliper. Do not kink the brake hose.

Copyright 2005. All Rights Reserved

SET-UP ON CAR (continued)

4. Install the lug nuts to hold the rotor in place, torque to factory recommended specifications.



5. Install the stud guard over the studs or lug nuts.

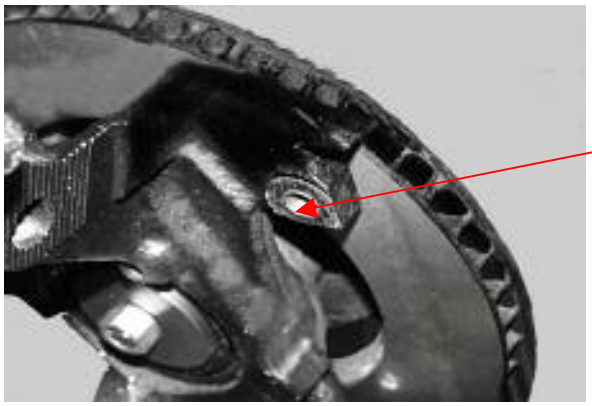
WARNING: This is a safety precaution to prevent articles of clothing etc.from being caught in the rotating rotor or hub.

6. It is always a good machine practice to measure the rotor thickness. Refer to the shop manual for correct procedure and specifications.

Copyright 2005. All Rights Reserved

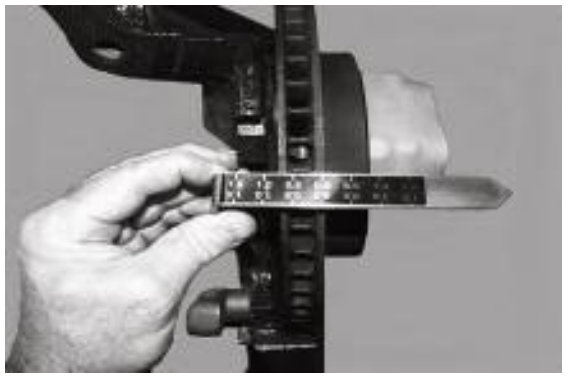
SET-UP ON CAR (continued)

7. Scrape or wire brush the caliper mounting surface clean.



WARNING: Caliper mounting surfaces MUST be free of rust or scale for accurate mounting.

8. Using the scale provided with the Kwik-Mount, position the split side on the caliper mounting surface with the numerical scale crossing the rotor radius. Read the scale for the number closest to the rotor center. This number represents the spacer thickness needed to mount the links.



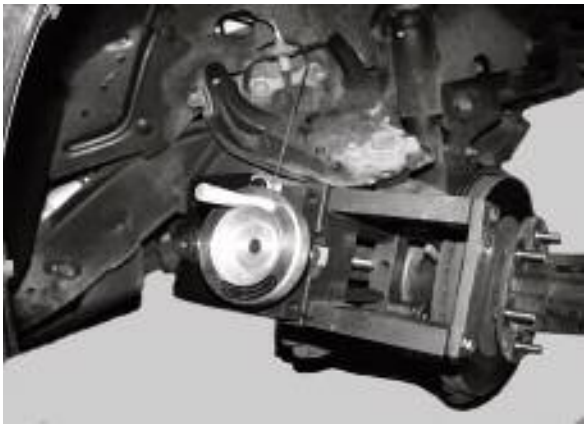
9. Attach the pointer to the Kwik-Mount handle. Place the mounting handle on the link studs. With the mounting links loose, move the Kwik-Mount handle until the pointer is on rotor centerline, tighten the links. This positions the cutter bits correctly and insures a good surface finish.

Copyright 2005. All Rights Reserved

SET-UP ON CAR (continued)

10. Install the silencer band. Use the retainer clips to assist in the installation, then remove the clips before turning the rotor.

11. Install the frame with Power Feed attached to the mounting links. Tighten fasteners.



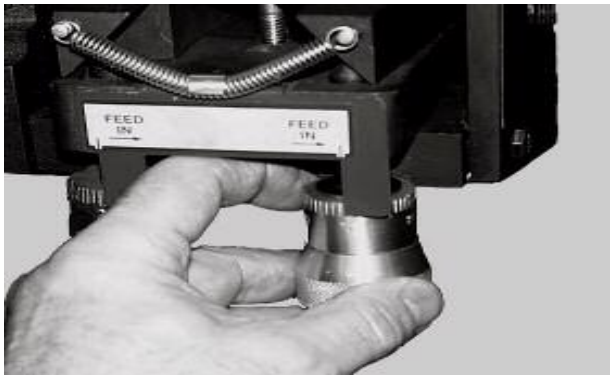
12. Install the bed being sure that the top of the tool bits are into the direction of rotor rotation.

Copyright 2005. All Rights Reserved

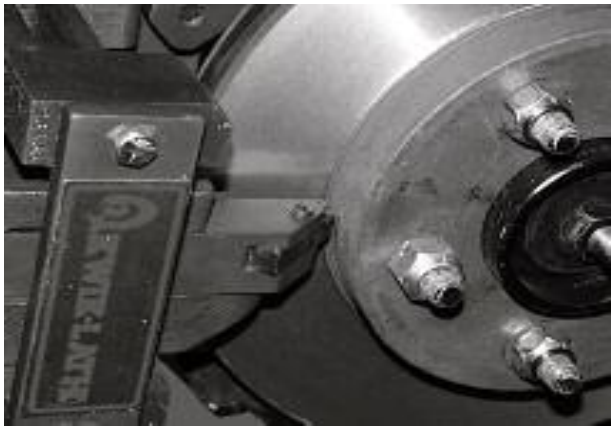
SET-UP ON CAR (continued)

13. Turn the hand wheel and move the tool bits into the center of the rotor surface. Turn the rotor by hand in the direction it will be running during the machining operation

Now lock the tool holders with bolt on top of the bed. Note: Control knobs should have a slight drag. Turn each feed control knob carefully until the tool bit scratches the rotor surface. Do not back control knobs out.



14. Turn the hand wheel in until BOTH tool bits clear the inside of the rotor surface.

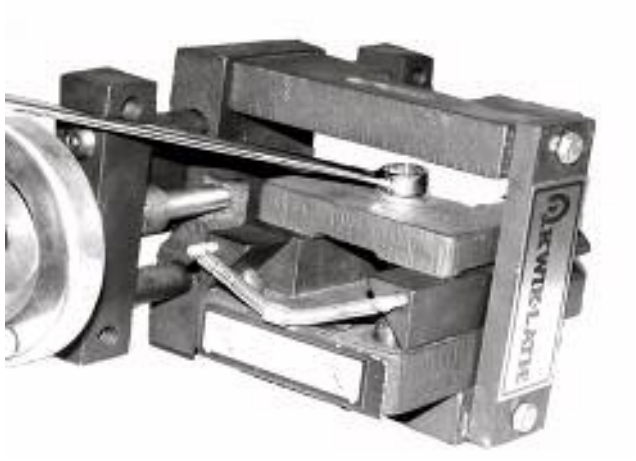


Copyright 2005. All Rights Reserved

SET-UP ON CAR (continued)

WARNING: -When cutting rotors with raised center hubs, make sure the cutting bits do not rub against the hub. Turn each feed control knob four lines, this is approximately .008. **DO NOT** take heavy cuts, keep cuts to .008 or less.

15. Lock the tool holders in place by gently tightening the bolt on the top of the tool bed.



16. Position the drive belt in the smallest pulley groove on the power feed motor and the largest pulley groove on the hand wheel. This will give the slowest feed rate and the best possible surface finish.

Copyright 2005. All Rights Reserved

TURNING THE ROTOR

1. With the transmission in neutral or park, start the engine and warm up the vehicle until the idle is at service manual specifications. Keep foot off the brake pedal!
   NOTE: -If a Power Drive (Part Number 108-0004-02) is used for this operation, refer to the Power Drive operating manual for proper procedures.

2. Vehicles with manual or automatic transmissions should be placed in 1st gear unless directed otherwise by the vehicle service manual.

3. Turn the power feed motor on and snap it in place. There should now be tension on the drive belt and the hand wheel should be rotating.

4. Allow the Kwik-Lathe to feed out until the tool bits are off the rotor surface. Switch the power feed off, shut the engine off, and now examine the rotor. If the surface is smooth and satisfactory, repeat the operation on the opposite side. If the surface is not satisfactory, then feed the tool bits back to the inside diameter of the rotor and repeat the turning operation. DO NOT TURN ROTORS BELOW MINIMUM THICKNESS.

   CAUTION: Do not put the transmission into park until the engine is off the wheels have stopped turning. Do not step on the brake.

Copyright 2005. All Rights Reserved

HELPFUL HINTS

- Use a vacuum to clean up the dust and chips, do not use compressed air.
- Clean the rotor with soapy water or brake cleaner and wipe with a clean cloth to remove any particles.

A good rotor finish will be smooth and constant with no chatter marks or grooves.

To ensure proper operation and performance, always insist on Original Kwik-Way Parts and Supplies.

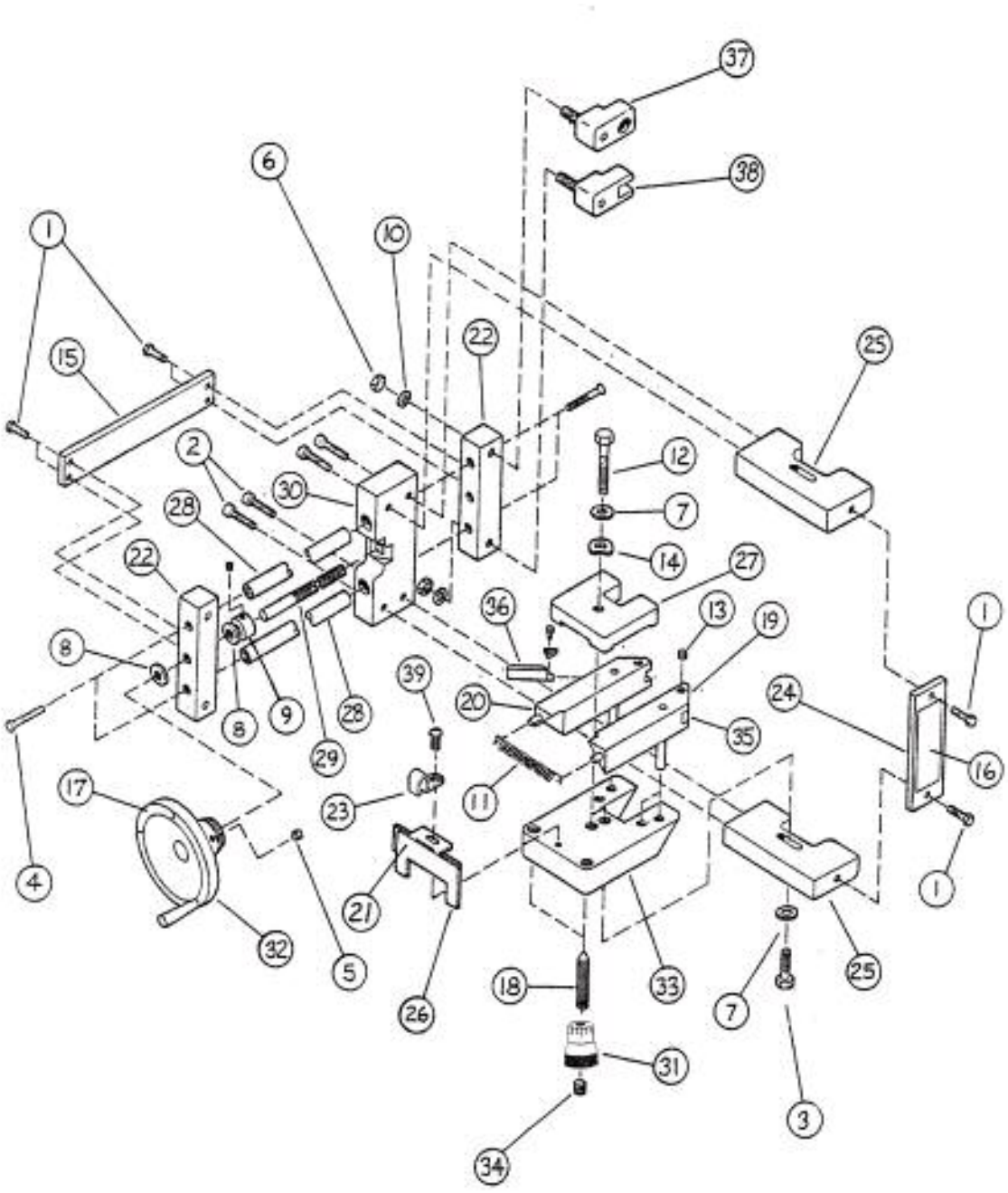
OPERATING SUPPLIES

000-0070-64	Drive Belt for Power Feed
109-1092-23	Carbide Inserts [pkg.10]
108-1060-00	Silencing Band [solid rotor]
108-1061-00	Silencing Band [vented rotor]

OPTIONAL KWIK-MOUNT KITS
SEE PAGES 20-24

Copyright 2005. All Rights Reserved

KWIK-LATHE ASSEMBLY



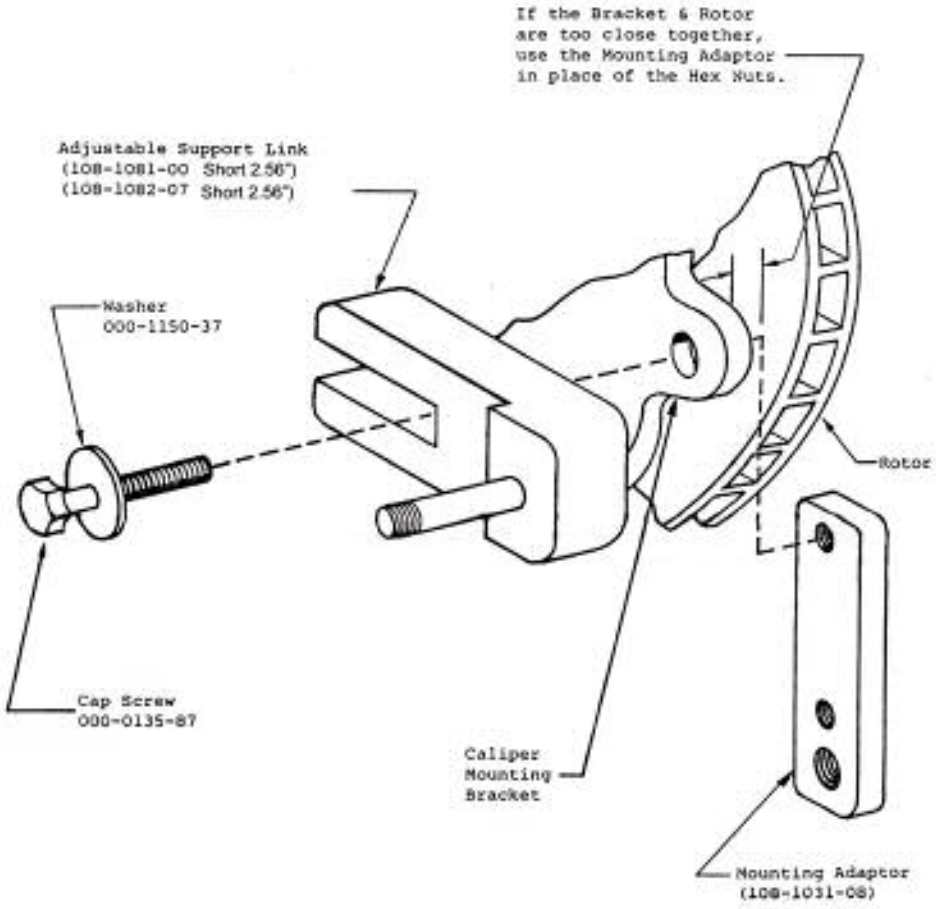
Copyright 2005. All Rights Reserved

KWIK-LATHE PARTS LIST

	Part Number	Description	Req'd
1.	000-0102-00	¼-20x3/4 Hex Head Cap Screw	6
2.	000-0166-32	¼-20x1-1/4 Socket Head Cap Screw	4
3.	000-0104-21	5/16-18x1-1/4 Hex Head Cap Screw	4
4.	000-0591-88	3/8-16x1-3/4 Socket Button Head	4
5.	000-0485-26	¼-20x3/8 Socket Point Set Screw	1
6.	000-1045-15	3/8-16 Hex Jam Nut-Z.P.	2
7.	000-1150-54	5/16 SAE Washer-Z.P. GR 8	2
8.	000-1183-11	Thrust Washer ½ I.D. x 15/16 O.D.	2
9.	000-1452-03	Collar ½ I.D.	1
10.	000-1150-37	5/16 Wrought Iron Washer	2
11.	000-1842-09	Tension Spring	1
12.	000-0104-29	5/16-18x2-1/4 Hex Head Cap Screw	1
13.	000-0540-70	5/16-18x1/4 Oval Point Set Screw	2
14.	000-1183-20	Curved Washer	1
15.	108-1002-06	Support Plate	1
16.	000-6606-04	Kwik-Lathe Nameplate	1
17.	000-6608-25	Decal-4" Handwheel	1
18.	102-1010-00	Feedscrew-Toolholder	1
19.	108-1003-50	Tool Holder Assembly-Right 6.38 lg.	1
20.	108-1003-40	Tool Holder Assembly-Right 6.38 lg.	1
21.	000-6613-41	Feed Decal	1
22.	108-1000-90	Rod Support	2
23.	000-1242-22	Clip	1
24.	108-1004-19	Frame Plate	1
25.	108-1005-67	Left Frame	1
26.	108-1020-50	Marker Plate	1
27.	108-1092-62	Tool Holder Clamp	1
28.	108-1006-90	Guide Rod	2
29.	108-1007-02	Feedscrew	1
30.	108-1008-00	Guide	1
31.	110-1008-33	Size Control Knob	2
32.	108-1209-08	Handwheel/Pulley Assembly	1
33.	108-1018-14	Tool Holder Plate	1
34.	000-0495-14	½-20x1/2 Cup Point Set Screw	2
35.	108-1101-00	Insert Tool Holder-Right Hand	1
36.	108-1100-00	Insert Tool Holder-Left Hand	1
37.	108-1082-07	Link, Support-2.56 lg.	1
37.	108-1082-10	Link, Support-3.25 lg	1
38.	108-1081-00	Link, Support, Slotted 2.56 lg	1
38.	108-1081-10	Link, Support, Slotted 3.25 lg	1
39.	000-0595-01	10-24 x 3/8 button Head CS	1
40.	000-7106-44	Spring Dowel (grooved)	2
41.	000-7000-45	¼x3/4" Dowel	2

Copyright 2005. All Rights Reserved

STANDARD LINK ADAPTER



Copyright 2005. All Rights Reserved

OPTIONAL KWIK-WEDGE ADAPTER
FORD F-150, AEROSTAR AND RANGER #108-0200-00

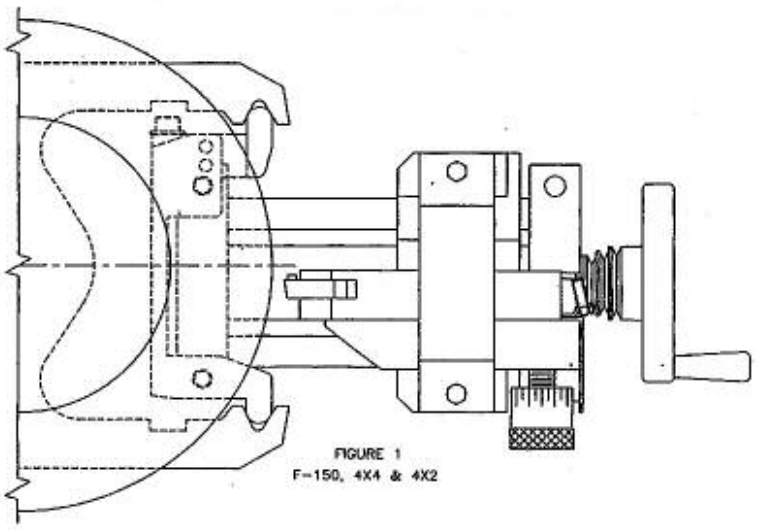


FIGURE 1
F-150, 4X4 & 4X2

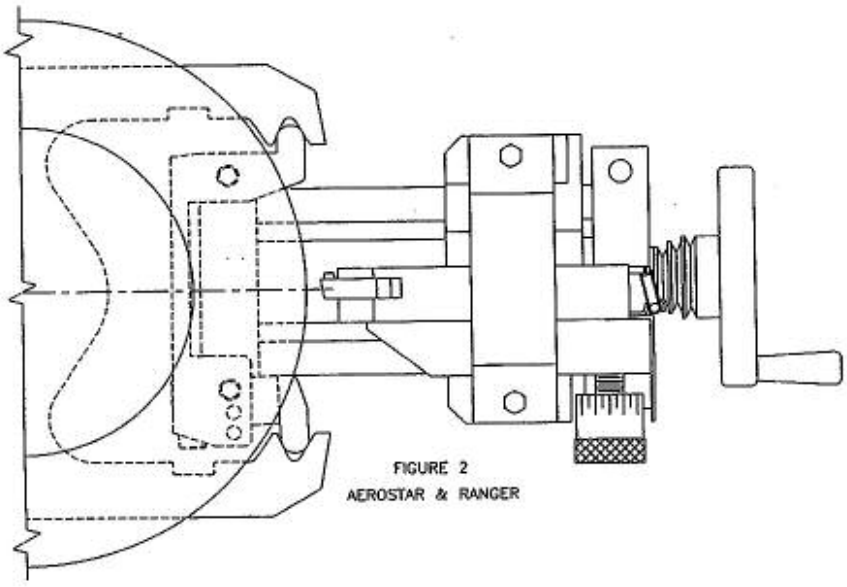
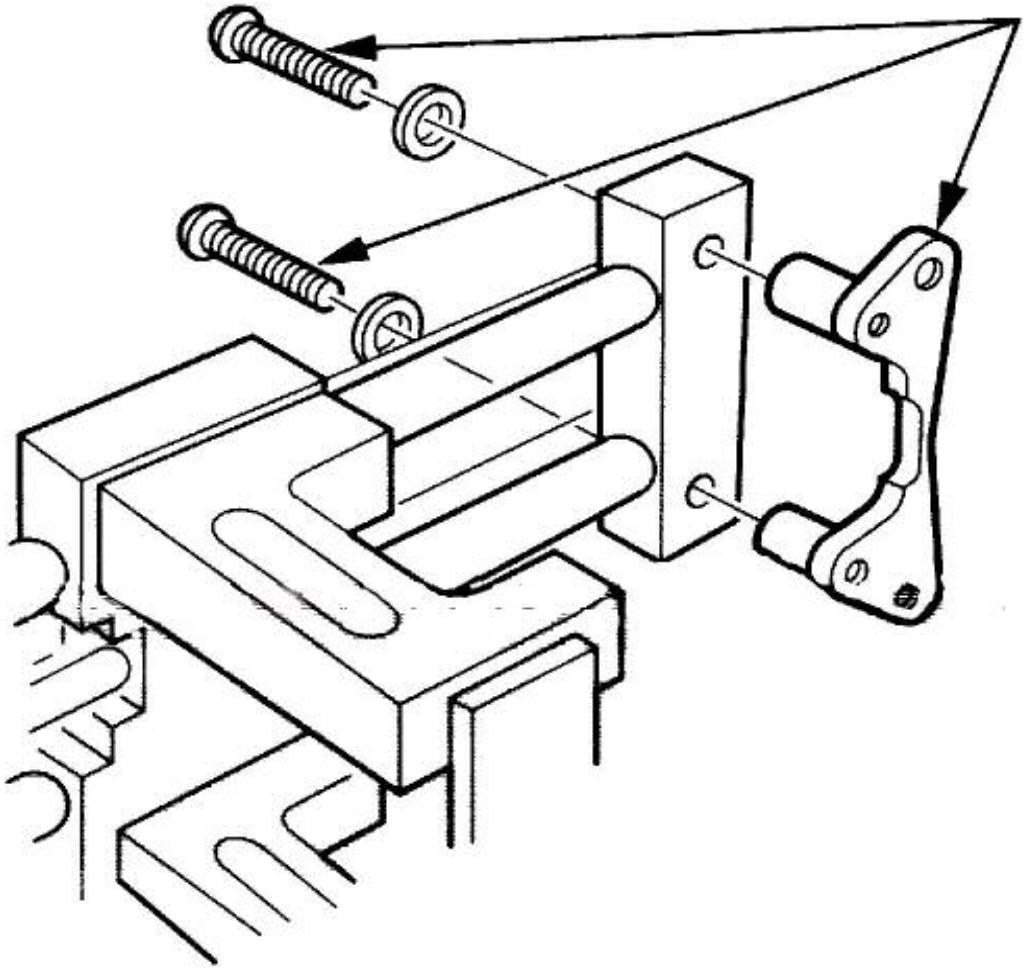


FIGURE 2
AEROSTAR & RANGER

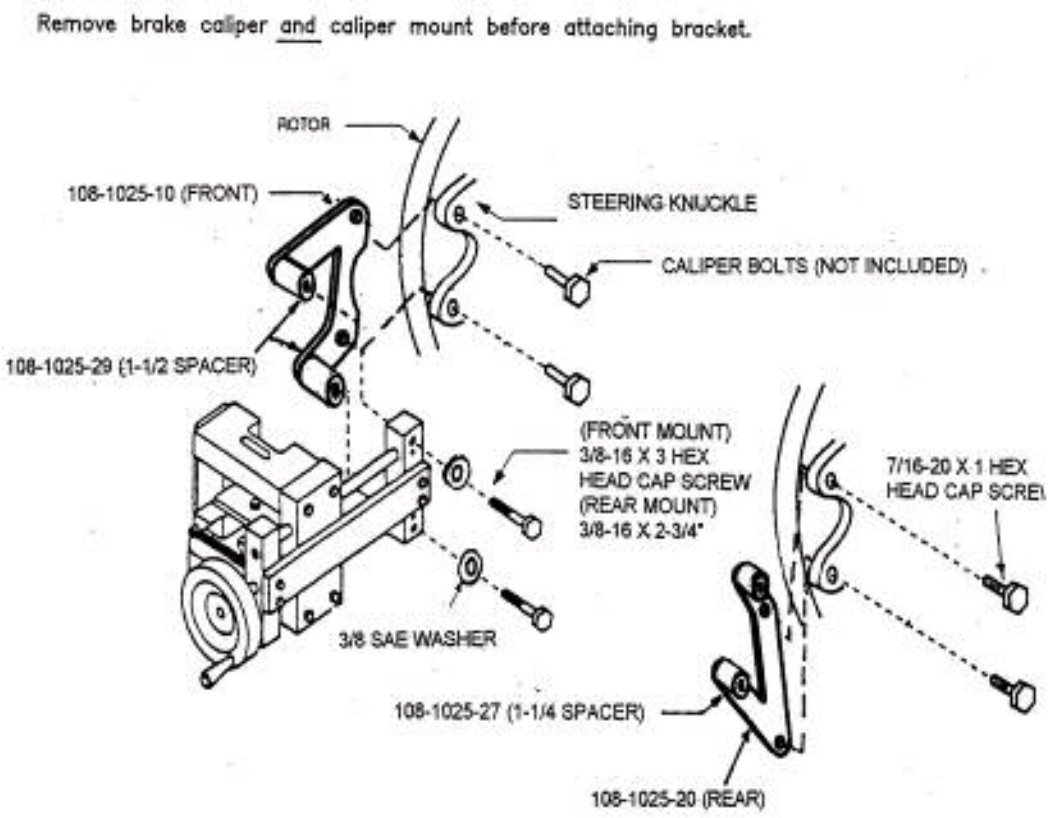
Copyright 2005. All Rights Reserved

OPTIONAL HONDA/ACURA ADAPTER KIT
#108-0060-00



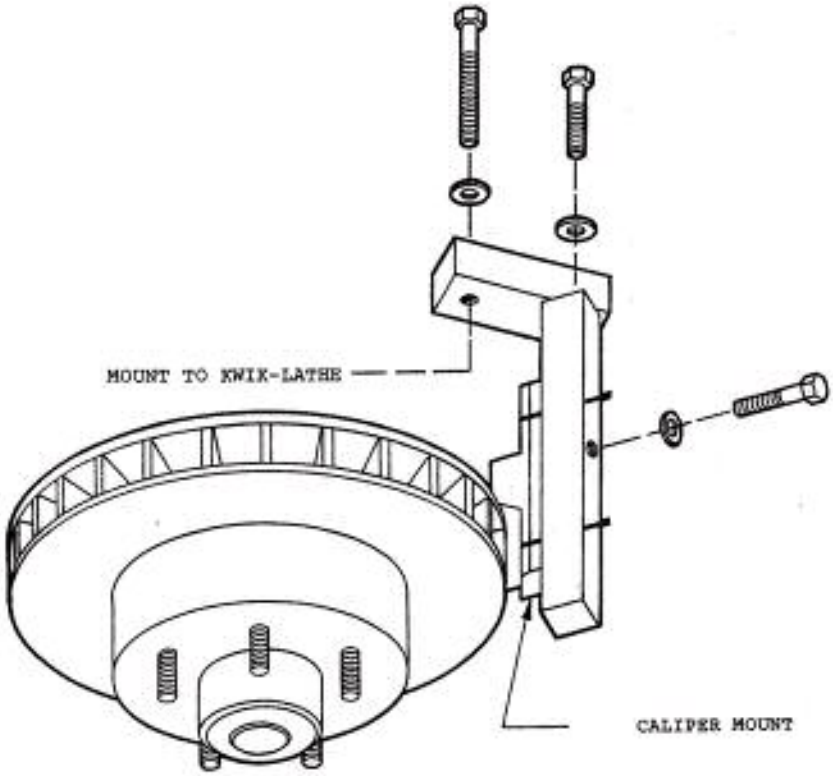
Copyright 2005. All Rights Reserved

OPTIONAL HONDA PASSPORT/ISUZU RODEO REAR ADAPTER #108-1025-50



Copyright 2005. All Rights Reserved

OPTIONAL FORD, DODGE, 4-WHEEL DRIVE/VAN KIT #108-0121-09



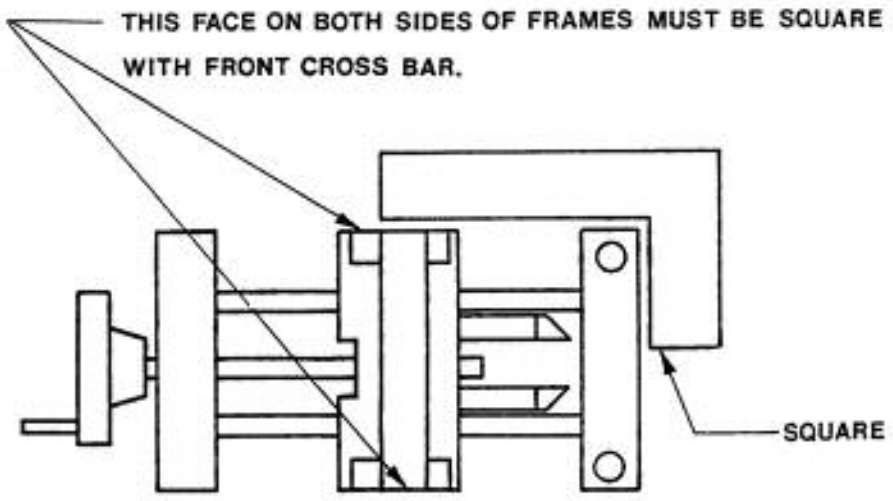
OTHER OPTIONS AVAILABLE BUT NOT SHOWN:

Composite Rotor Clamp Kit [GM, Ford, Jeep] #108-1066-00

Copyright 2005. All Rights Reserved

TROUBLESHOOTING GUIDE

CONDITIONS	POSSIBLE CAUSE
1. Poor Rotor Finish	1. Loose or worn wheel bearings-replace before attempting to return rotors 2. Vibration dampener not used 3. Rotor rotation direction incorrect-See Step 12 4. Not on centerline of rotor hub 5. Burrs or dirt under carbide inserts 6. Taking cuts greater than .008 (See Step 14) 7. Burrs on bottom of tool bit 8. Frames out of square (See Illustration below) 9. Nicks or burrs on bottom of slot for tool bit (Tool bit must lock down on flat surface) 10. Nicks or burrs where tool holder locks down 11. Feed too fast-with Power Feed 12. Rotor RPM too fast-engine not off of fast idle or idle too fast.
1. Premature deterioration of carbide insert cutting point	1. Rotor RPM too fast-engine not off of fast idle or idle too fast



Copyright 2005. All Rights Reserved

Kwik-Way Products Inc.
500 57th St., Marion, IA 52302 USA
319/377-9421
319/377-9101 (FAX)
800/553-5953
www.kwik-way.com
service@kwik-way.com